



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF : Daniel F. Graves et al.  
FOR : **CO<sub>2</sub> TERMINATED RUBBER FOR PLASTICS**  
SERIAL NO. : 09/819,336  
FILED : March 28, 2001  
EXAMINER : Unknown  
ART UNIT : 1713  
ATTORNEY DOCKET NO. : P96040US1A/FIR 2 0020

1713  
#2  
7-11-01  
**RECEIVED**

JUL 10 2001

**TC 1700**

Cleveland, Ohio 44114-2518  
June 29, 2001

**INFORMATION DISCLOSURE STATEMENT**

Assistant Commissioner of Patents  
Washington, D.C. 20231

Dear Sir:

In accordance with 37 C.F.R. §§ 1.56, 1.97, 1.98 and MPEP § 609, applicant(s) submit(s) the following Disclosure Statement concerning art of which the applicant(s) is (are) aware. A copy of PTO-1449 is enclosed herewith.

This Information Disclosure Statement is not intended to constitute an admission that any patent, publication or other information referred to herein or submitted herewith is "prior art" for this invention unless specifically designated as such.

In accordance with 37 C.F.R. §1.97(g) and (h), the filing of this Information Disclosure Statement shall not be construed to mean that a search has



been made, and no other material information as defined in 37 C.F.R. §1.56(b) exists.

Under § 1.98(a)(3), no concise explanation of relevance is required for information that is in the English language. Accordingly, the enclosed patent(s) require no further explanation (or no translation is available).

3,070,579 – Szwarc  
3,135,716 – Uraneck  
3,451,988 – Langer, Jr.  
4,075,186 – Ambrose  
4,096,254 – Benson  
4,329,439 – Lohr, Jr.  
4,417,029 – Milkovich  
4,503,188 – Mancinelli  
4,518,753 – Richards  
4,753,991 – Bronstert  
4,970,254 – Willis  
5,376,745 – Handlin, Jr.  
5,395,902 – Hall  
5,612,435 – Bening  
5,728,782 – Brady  
5,739,254 – Fuller  
5,792,824 – Natori  
5,814,709 – De Boer  
5,827,927 – Gagné  
5,844,050 - Fukahori

Other Art

Hayashi et al., Journal of Polymer Science: Part A, Vol. 2, pp 2571-2594 (1964)  
Glycols and Dicarboxylic Acids from Butadiene, Isoprene, and Styrene and Some  
Derived Block Polymers, Esters, and Urethans.

Wyman et al., Journal of Polymer Science: Part A, Vol. 2, pp 4545-4550 (1964), Reaction of Polystyryllithium with Carbon Dioxide.

P. Mansson, Journal of Polymer Science Pol. Chem. 2d., Reactions of Polystyryl Anions with Carbon Dioxide and Oxygen. Analysis of Products by Silica Gel Chromatography.

H. Nakagawa et al., Makromol Chem. 183, pp 2071-2076 (1982), Functionalization of Polymeric Organolithium Compounds Carbonation.

Abstract - Elastomers, Vol. 85, (1976), page 55, Process for Polyolithiating Unsaturated Polymers.

Abstract - Plastics Manual, Vol. 121, (1994), page 65, Olefin Polymers Having a Carboxyl Group on One End and Manufacture Thereof.

Abstract - Synthetic High Polymers, Vol. 117, (1964), page 19, Melt-metalation of Block Copolymers.

Abstract - Plastics Fabr. Uses, Vol. 107, (1987), page 53, Modified Block Copolymers and Impact-Resistant Compositions.

Abstract - Synthetic High Polymers, Vol. 114, (1991) page 19, Functionalized Polymers from Unsaturated Diene-styrene Copolymers by Hydrogenation and Reaction with Functionalizing Agent.

Abstract - Plastics Manual, Vol. 111, (1989), page 67, Impact-Resistant Blends of Polar Thermoplastic Polymers and Modified Block Copolymers.

Abstract - Plastics Manual, Vol. 87, (1977), page 37, Manufacture of Telehelical Polymers.

Abstract - Synthetic High Polymers, Vol. 95, (1981), Carboxylation of "Living" Polymers

Abstract - Synthetic High Polymers, Vol. 81 (1974), Carboxylation of Polymers Having Alkali Metal Atom at End-Groups.

Abstract - Rubber and Other Elements, Vol. 65, 1966, Butadiene Polymers.

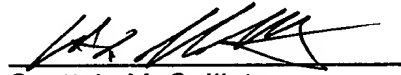
Abstract - 115: 72522n – Functionalization of Polymeric Organolithium Compounds by Carbonation 18 April 1991.

Abstract - 110: 8848t – Block Copolymer Grafting Process for Preparing Elastomers Containing Functional Groups, 20 July 1988.

Under § 1.97(b)(3), this information disclosure statement is being filed before the mailing date of a first Office Action on the merits. Although it is believed no fee is necessary, any deficiency in fees should be charged to Deposit Account No. 06-0308.

Respectfully submitted,

FAY, SHARPE, FAGAN,  
MINNICH & MCKEE, LLP



Scott A. McCollister  
Reg. No. 33,961  
1100 Superior Avenue  
Seventh Floor  
Cleveland, Ohio 44114-2518  
(216) 861-5582

**CERTIFICATE OF MAILING**

I hereby certify that this **INFORMATION DISCLOSURE STATEMENT** is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231, on June 29, 2001.

By: \_\_\_\_\_

  
Georgeen B. George